

DOCKET NO.: MSFT-2736/305415.1

PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Marc Najork

Confirmation No.:

Application No.: 10/663,933

Group Art Unit: Not Yet Assigned

Filing Date: September 16, 2003

Examiner: Not Yet Assigned

For: **IMPROVED SYSTEMS AND METHODS FOR RANKING DOCUMENTS  
BASED UPON STRUCTURALLY INTERRELATED INFORMATION**

DATE OF DEPOSIT: 11/21/03

I HEREBY CERTIFY THAT THIS PAPER IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL, POSTAGE PREPAID, ON THE DATE INDICATED ABOVE AND IS ADDRESSED TO THE UNITED STATES PATENT AND TRADEMARK OFFICE, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450.

David M. De Santo

TYPED NAME: David M. De Santo

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

**INFORMATION DISCLOSURE STATEMENT**

Pursuant to 37 CFR § 1.56 and in accordance with 37 CFR §§ 1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 CFR § 1.56(b).

- ☒ In accordance with § 1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of

the above identified application as set forth in § 1.491, before the mailing date of a first Office Action on the merits of the above-identified application, or before the mailing date of a first Office Action after the filing of request for continued examination under § 1.114, no additional fee is required.

☐ In accordance with § 1.129(a), this Information Disclosure Statement is being filed in connection with ☐ the first or ☐ second After Final Submission, therefore:

☐ Certification in Accordance with § 1.97(e) is attached; or

☐ The fee of \$180.00 as set forth in § 1.17(p) is attached.

☐ In accordance with § 1.97(c), this Information Disclosure Statement is being filed after the period set forth in § 1.97(b) above but before the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311, or before an action that otherwise closes prosecution in the application, therefore:

☐ Certification in Accordance with § 1.97(e) is attached;

or

☐ The fee of \$180.00 as set forth in § 1.17(p) is attached.

☐ In accordance with § 1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311 but before, or simultaneously with, the payment of the Issue Fee, therefore included are: Certification in Accordance with § 1.97(e); and the submission fee of \$180.00 as set forth in § 1.17(p).

- ☒ Copies of each of the references listed on the attached Form PTO-1449 are enclosed herewith.
- ☐ Copies of references listed on the attached Form PTO-1449 are enclosed herewith
- ☐ Copies of references listed on the attached Form PTO 1449 are not required to be submitted pursuant to the June 30, 2003 recent revisions to 37 CFR § 1.98(a)(2)(i).

EXCEPT THAT:

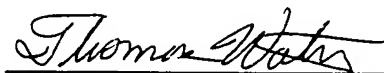
- ☐ In view of the voluminous nature of references [list as appropriate], and the likelihood that these references are available to the Examiner, copies are not enclosed herewith.
- ☐ In accordance with § 1.98(d), copies of the following references listed on the attached Form PTO-1449 are not enclosed herewith because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application(s) for which a claim for priority under 35 U.S.C. § 120 have been made in the instant application:
- ☐ Copies of references [list as appropriate] listed on the attached Form PTO-1449 were previously cited by or submitted to the Patent and Trademark Office in prior Application No.

, filed .

Please charge any deficiency or credit any overpayment to Deposit Account No. 23-3050. This form is submitted in duplicate.

English language abstracts have been provided for reference(s) # 9 which is not in the English language.

Date: 11/21/03

  
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<b>Form PTO-1449 Modified</b>  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office	Docket No. <b>MSFT-2736/305415.01</b>	Application No. <b>10/663,933</b>
	Applicant: <b>Marc Najork</b>	
	Filing Date <b>September 16, 2003</b>	Group <b>Not Yet Assigned</b>
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>		
	<b>1</b>	Dhyani, D. et al, "Deriving and Verifying Statistical Distribution of a Hyperlink-Based Web Page Quality Metric;" <i>Data &amp; Knowledge Engineering</i> , <b>2003</b> ; Vol. 46, No. 3, pp. 291-315
	<b>2</b>	Upstill, T., "Query-Independent Evidence in Home Page Finding;" <i>ACM Transactions on Information Systems</i> ; <b>2003</b> ; Vol. 21, No. 23 , pp. 286-313
	<b>3</b>	Haveliwala, Taher H., "Topic-Sensitive PageRank: A Context-Sensitive Ranking Algorithm for Web Search;" <i>IEEE Transactions on Knowledge and Data Engineering</i> ; <b>2003</b> ; 15(4), 784-796
	<b>4</b>	Devanshu, D., "A Survey of Web Metrics;" <i>ACM Computing Surveys</i> ; <b>2002</b> ; 34(4), 469-503
	<b>5</b>	Thelwall, M., "Subject Gateway Sites and Search Engine Ranking;" <i>Online Information Review</i> , <b>2002</b> , 26(2),101-107
	<b>6</b>	Rafiei,D., "What Is This Page Known For? Computing Web Page Reputations;" <i>Computer Networks</i> , <b>2000</b> ; 33(1-6), 823-835
	<b>7</b>	Henzinger, M.R., "Measuring Index Quality Using Random Walks on the Web;" <i>Computer Networks</i> <b>1999</b> ; 31(11-16),1291-1303
	<b>8</b>	Brin, S., "The Anatomy of a Large-Scale Hypertextual Web Search Engine;" <i>Computer Networks and ISDN Systems</i> ; <b>1998</b> ; 30(1-7),107-117
<b>EXAMINER</b>		<b>DATE CONSIDERED</b>



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<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
	<b>9</b>	Song, Ju-ping, et al., "Improved PageRank Algorithm for Ordering Web Pages;" <i>Journal of Shanghai Jiaotong University</i> ; Shanghai Jiaotong University Press, China, Mar. 2003; Vol. 37, No. 3, pp. 397-400 ( <b>English Abstract attached</b> )	
	<b>10</b>	Chen, Yen-Yu, et al. "I/O-Efficient Techniques for Computing Pagerank;" <i>CIKM</i> , <b>2002</b> , 549-557	
	<b>11</b>	Z. Chen, et al. "A Unified Framework for Web Link Analysis;" <i>WISE</i> , <b>2002</b> , <i>Proceedings of the Third International Conference on Web Information Systems Engineering</i> , IEEE Comput. Sci, <b>2002</b> ; 63-70	
	<b>12</b>	Pretto, L, "A Theoretical Analysis of Google's PageRank;" <i>Proceedings of 9<sup>th</sup> International Symposium, String Processing and Information Retrieval 2002</i> , Sept. 11-13, 2002, Lisbon, Portugal; Springer-Verlag, Germany, <b>2002</b> ; (Lecture Notes in Computer Science, Vol. 2476), pp. 131-144	
	<b>13</b>	Baeza-Yates, R. et al. "Web Structure, Dynamics and Page Quality;" <i>Proceedings of 9<sup>th</sup> International Symposium, String Processing and Information Retrieval 2002</i> , Sept. 11-13, 2002, Lisbon, Portugal; Springer-Verlag, Germany, <b>2002</b> ; (Lecture Notes on Computer Science, Vol. 2476), pp. 117-130	
	<b>14</b>	Pandurangan, G., "Using PageRank to Characterize Web Structure;" <i>Proceedings of 8<sup>th</sup> Annual International Conference, Computing and Combinatorics (COCOON)</i> , 2002, Aug. 15-17, 2002, Singapore; Springer-Verlag, Germany, <b>2002</b> ; (Lecture Notes in Computer Science, Vol. 2387), pp. 330-339	
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Sheet 3 of 3

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<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>		
	15	Kim, S.J., et al. "An Improved Computation of the PageRank Algorithm;" <i>Proceedings of 24<sup>th</sup> BCS-IRSG European Colloquium on IR Research, Advances in Information Retrieval, March 25-27, 2002, Glasgow, UK</i> ; Springer-Verlag, Germany, 2002; (Lecture Notes in Computer Science, Vol. 2291), pp. 73-85
<b>EXAMINER</b>		<b>DATE CONSIDERED</b>